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Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 20554

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FEDERAL COMMUNICATIONS COMMISSION  
OFFICE OF SECRETARY

In the Matter of )  
 ) MM Docket No. 95-176  
Closed Captioning and Video )  
Description of Video Programming )

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COMMENTS OF BELL ATLANTIC<sup>1</sup>

Closed captioning and video description are important mechanisms to make video programming accessible to persons with hearing or visual disabilities, permitting them to participate fully as consumers of information and entertainment products and services. Bell Atlantic has actively supported measures by advocacy groups to promote accessibility to telecommunications and entertainment services, including providing payphones equipped with TTY functionality, underwriting closed captioning for local television news shows, and providing financial support for other community programs that use telecommunications technology to improve the quality of life for people with disabilities.

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<sup>1</sup> The Bell Atlantic companies ("Bell Atlantic") are Bell Atlantic-Delaware, Inc., Bell Atlantic-Maryland, Inc., Bell Atlantic-New Jersey, Inc., Bell Atlantic-Pennsylvania, Inc., Bell Atlantic-Virginia, Inc., Bell Atlantic-Washington, D.C., Inc., Bell Atlantic-West Virginia, Inc., and the Bell Atlantic Video Services Company.

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List A B C D E

To facilitate greater accessibility by individuals with hearing disabilities, the 1996 Telecommunications Act requires the Commission to adopt rules by August 1997 ensuring that video programming first published or exhibited after the rules become effective provide closed captioning.<sup>2</sup> The Act also requires the Commission to report to Congress by August 1996 on the feasibility of and methods for providing video descriptions of video programming to aid individuals with visual disabilities.<sup>3</sup>

It is critical, however, that the Commission craft proposed rules governing provision of closed captioning that (1) delay compliance, where appropriate, until technological limitations making captioning infeasible or unduly burdensome can be overcome, (2) encourage voluntary industry development of technical standards governing delivery of captioning on digital video systems, and (3) place responsibility for providing captioning on the program producer.

The Commission's current inquiry into the need for and technical feasibility of providing video description for video

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<sup>2</sup> See Telecommunications Act of 1996, P.L. 104-104, Section 305 (adding Section 713(b) to 47 U.S.C. 612) (1996) ("Telecommunications Act").

<sup>3</sup> *Id.*, adding Section 713(f).

programming should provide useful insights for the Commission, service providers and the disabled community alike. Should the Commission decide to recommend to Congress any requirements for video description at the conclusion of this inquiry, its recommendations should reflect the same principles as those outlined above for closed captioning.

**I. Industry Technical Standards Would Facilitate  
Delivery of Closed Captioning on Digital Systems**

The Commission has sought comment on provision of closed captioned programming over non-broadcast, non-cable video delivery systems, such as wireless cable, SMATV and DBS systems, and other telephone company video delivery systems.<sup>4</sup>

Bell Atlantic currently provides or plans to provide video programming over three different digital systems: switched digital video (SDV) and asymmetric digital subscriber line (ADSL) wireline systems, and wireless cable (MMDS) systems. Digital transmission technologies, using MPEG-2 encoding standards, are expected to permit carriage of closed captioning digitally encoded

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<sup>4</sup> See *Closed Captioning and Video Description of Video Programming*, MM Docket No. 95-176, Notice of Inquiry at ¶ 14.

by a program producer.<sup>5</sup> When the previously captioned programming is encoded, the closed captioning data would be extracted before the video portion is encoded. That captioning data would then be transmitted as a separate packet within the data stream. The video portion and the captioning portion would then be delivered simultaneously to the decoder at the consumer's premises, where the closed captioning would be reinserted in line 21 of the vertical blanking interval and displayed on television receivers that have the capability to receive closed captioning. Bell Atlantic also currently expects to be able to carry video description for programming on its digital systems over a secondary audio program (SAP) packet within the digital data stream.

In fact, Bell Atlantic is currently delivering video programming that has previously been captioned by the programming provider over its digital video system in Dover Township, New Jersey to consumers with closed captioning-capable television sets.

Many of the hardware and software components of advanced digital systems that Bell Atlantic will deploy, however, are in

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<sup>5</sup> Bell Atlantic's ADSL digital video system in northern Virginia, which utilizes a 1.5 Megabit rate and MPEG-1 encoding standards, does not lend itself to the transmission of live or real time video programming. Closed captioning incorporated in previously encoded, digitized material, however, such as movies, could be displayed in video programming over ADSL systems.

prototype stage or not yet engineered to accommodate captioning or description. Bell Atlantic cannot ensure compliance with any captioning or description requirements for any future systems it will deploy until it has had the opportunity to develop and test all system components required to support those requirements. The Commission should therefore ensure that any proposed rules concerning captioning or description provide significant lead time for digital system compliance. In addition, to the extent that any particular transmission system -- digital or analog -- cannot deliver captioning or description due to technological limitations, the Commission should exercise its authority under the 1996 Act to exempt video programming services provided over such systems from complying with the Commission's requirements until those technological limitations can be overcome.<sup>6</sup>

There is one additional challenge for digital transmission of closed captioning and video description on video programming. Although the MPEG-2 digital standard developed by the International Standards Organization makes provision for inclusion of auxiliary data and identifies where such data should be carried

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<sup>6</sup> See Telecommunications Act, Section 305 (adding Section 713(d)(1) and (3) to 47 U.S.C. 612).

in the digital stream,<sup>7</sup> there is currently no standardized closed captioning syntax.<sup>8</sup> As a result, the set top decoder would have to use the same proprietary system as the process by which the programming was originally encoded or the set top would not know the syntax to use in decoding it. In order to facilitate compatibility of closed captioning techniques with digital equipment on a non-proprietary basis, the Commission should encourage voluntary industry consensus on a standardized closed captioning syntax.

**II. Closed Captioning and Video Description Should Be  
Provided by the Producer or Creator of Programming**

It would be inefficient and, in some cases, technically impractical or even unlawful to place responsibility for providing closed captioning or video description on the video programming distributor, rather than the program creator.

First, in a digital system, the encoding of programming material will often be performed at the programming provider's

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<sup>7</sup> There is also a more specific industry definition of the appropriate place to carry closed captioning. See "Picture User Data Syntax," Sect. 5.2.2, A/53ATSC Digital TV Standard (Sept. 16, 1995).

<sup>8</sup> A full description of the closed captioning syntax is being developed by the Electronic Industry Association's R-4.3 Committee on Television Data Systems.

premises, not at the distributor's premises. In order for the programming distributor or video system operator to create and insert closed captioning or video description, the distributor or operator would have to access the encoded cable, broadcast or satellite programming feed, locate the particular digital 1s and 0s representing the particular programming at issue, decompress those signals in order to retrieve the picture and sound in order, create and insert captioning or description, again compress and encode the programming, and then retransmit it. That process could result in some loss of picture quality due to repetitive compression and decompression of the video stream.

Moreover, placing the responsibility for creation and insertion of captioning or description on the distributor of either live or pre-recorded programming would require duplicative and expensive action by every local distributor. In contrast, if captioning or description is added when programming is created, the expense is incurred once and becomes part of the programming wherever it is subsequently distributed.

In the case of live programming, it is much more sensible to place responsibility for captioning or description on the program creator, who is more likely to attain a higher degree of accuracy under acute time pressures. Unlike the programming

distributor or video system operator, the program creator will have access to the program script, know in advance the likely program format and presentation, have the correct spelling of the names of all of the people, places and things featured in the program, and generally have a much higher probability of providing accurate captioning or descriptions in "real time."

Finally, under existing law, broadcast signals may not be altered, by adding or deleting material, or otherwise edited by the programming distributor.<sup>9</sup> Most existing agreements governing provision of non-broadcast programming contain similar requirements. As a result, programming distributors or network operators would be at substantial legal risk for copyright infringement if required to alter such programming by superimposing captioning or description.

### **Conclusion**

The Commission's proposed rules governing closed captioning, and any recommendations to Congress concerning video description, should accommodate technological limitations that prevent compliance with the Commission's requirements, encourage voluntary industry development of technical standards governing

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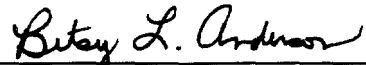
<sup>9</sup> See 17 U.S.C. § 106 and 111.



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Respectfully submitted,

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